

## MOBILEHOME PARK RAMPS

### Definitions

Ramp An accessory structure providing a sloping path of travel, intended for pedestrian use.

### Porch/Deck/Ramp located in Fire Severity Zones

Materials used for the walking surface of decks and stairs must be either Class A or B flame spread and be in compliance with Title 24, Part 2, California Residential Code, Section 327.9. At the time of inspection the applicant shall provide the supporting documentation certifying the materials comply the requirements of the current edition of the California Residential Code.

### Porch/Deck/Ramp Skirting located in Fire Severity Zones

Skirting shall be approved noncombustible or ignition-resistant material per Title 24, Part 2, California Residential Code Section 327.7. It shall provide protection from the intrusion of flames and embers in accordance with Standard SFM 12-7A-1 and must be installed at the time of final inspection.

**NOTE: THIS INFORMATION IS TO BE USED WITH THE HCD DECK PLAN**

#### **§ 1422. Application and Scope.**

(a) Except as otherwise noted, the requirements of this article shall apply to the construction, use, maintenance, and occupancy of accessory buildings or structures and building components constructed or installed adjacent to units both within and outside of parks.

(b) Accessory buildings or structures or building components that are constructed and maintained in accordance with those statutes and regulations which were in effect on the date of original construction, are not subject to the requirements of subsequent regulations. An accessory building or structure or building component that is moved to a different location shall be subject to the permit to construct requirements of this chapter. Any alterations or additions must comply with the current provisions of this chapter.

(c) No accessory structure may be attached to or be supported by an MH-unit if the manufacturer's installation instructions prohibit attachment or transmission of loads to the unit or require freestanding structures. (d) When the manufacturer's installation instructions are not available, accessory structures with a roof live load greater than ten (10) psf shall be freestanding. An existing awning or carport, exceeding ten (10) psf that was previously supported by the unit, may be reinstalled at the time of MH-unit installation.

NOTE: Authority cited: Section 18300, Health and Safety Code. Reference: Sections 18254 and 18552, Health and Safety Code.

#### **§ 1424. Regulated Structures.**

(a) Accessory buildings or structures or building components which do not comply with this article or are deemed to be unsafe by the enforcement agency shall not be allowed, constructed, or occupied.

(b) A permit shall be obtained from the enforcement agency to construct or install an accessory building or structure as required by Article 1 of this chapter, unless specifically exempted in section 1018 of this chapter.

NOTE: Authority cited: Section 18300, Health and Safety Code. Reference: Sections 18500, and 18552, Health and Safety Code.

#### **§ 1426. Accessory Buildings or Structures and Building Components Installed in Fire Hazard Severity Zones.**

(a) Accessory buildings or structures or building components constructed or installed in parks in a State Responsibility Area Fire Hazard Severity Zone or a local Very-High Fire Hazard Severity Zone, as indicated on the California Department of Forestry and Fire Protection's Fire Hazard Severity Zone Maps, shall comply with Title 24, Part 2.5, Chapter 3, section R327 of the California Residential Code (CRC) which is hereby incorporated by reference with the exception of the following provisions: Sections R327.1.5, R327.2 (Fire Protection Plan) and R327.3.6.

(b) Accessory buildings or structures or building components constructed or installed outside of parks in a State Responsibility Area Fire Hazard Severity Zone, a local Very-High Fire Hazard Severity Zone, or a local Wildland-Urban Interface Fire Area shall comply with the provisions of the CRC, Title 24, Part 2.5, Chapter 3, section R327.

NOTE: Authority cited: Sections 18300 and 18691, Health and Safety Code. Reference: Section 18691.

#### **§ 1428. Location.**

(a) In parks, accessory buildings or structures, or any part thereof, on a lot shall maintain the following setbacks from lot lines:

(1) When constructed of noncombustible materials:

(A) may be up to the lot line, provided a minimum three (3) foot clearance is maintained from any other unit, accessory building or structure, or building component on adjacent lots.

(2) When constructed of combustible materials:

(A) a minimum three (3)-foot clearance from all lot lines, and

(B) a minimum six (6)-foot clearance from any other unit, accessory buildings or structures, or building components on adjacent lots constructed of combustible materials.

(b) Cabanas shall meet the location requirements for units, as referenced in section 1330 of this chapter.

(c) Location requirements governing private garages and storage buildings are contained in section 1443.

(d) Stairways with landings not to exceed twelve (12) square feet may be installed to the lot line provided they are located a minimum of three (3) feet from any unit, or accessory building or structure, including another stairway, on an adjacent lot. However, if the stairway is an up-and-over design (steps up the front and down the back) that provides access to the lot beyond the stairway, it does not need to maintain the separation from a unit or accessory building or structure, including another stairway, on an adjacent lot.

(e) Fencing of any material, that meets the requirements of section 1514 of this article, may be installed up to a lot line.

(f) No portion of an accessory building or structure, or building component shall project over or beyond a lot line.

(g) Any accessory building or structure, or building component may be installed up to a lot line bordering a roadway or common area provided there is no combustible building or structure in the common area within six (6) feet and no building or structure of any kind within three (3) feet of any portion of the accessory building or structure, or building component. The maximum seventy-five percent (75%) lot coverage allowed by section 1110 of this chapter shall be maintained.

(h) Wood awning or carport support posts four (4) inches or greater in nominal thickness may be located up to a lot line provided the remainder of the awning or carport is composed of noncombustible material.

NOTE: Authority cited: Sections 18300, and 18610, Health and Safety Code. Reference: Sections 18552 and 18610, Health and Safety Code.

#### **§ 1432. Construction.**

(a) Construction and installation of accessory buildings or structures or building components shall comply with the structural requirements of the California Residential Code, except as otherwise provided by this article. The enforcement agency may require accessory buildings and structures or building components be designed and constructed to withstand live loads, vertical uplift or horizontal forces from any direction in excess of the minimum loads specified in this chapter, based on local geologic, topographic, or climatic conditions, when approved by the department.

(b) Accessory buildings and structures constructed of aluminum or aluminum alloy shall be designed to conform to the specifications contained in the California Residential Code.

(c) Unless data to substantiate the use of higher values is submitted to the enforcement agency, the allowable loading of accessory buildings or structures or building components on the soil shall not exceed one thousand five-hundred (1,500) psf vertical soil bearing pressure, one hundred fifty (150) psf of depth lateral soil bearing pressure, and one hundred sixty-seven (167) psf frictional resistance for uncased cast-in-place concrete piles.

NOTE: Authority cited: Section 18300, Health as Safety Code. Reference: Sections 18552 and 18620, Health and Safety Code.

### § 1433. Roof Live Load.

(a) Except as provided in section 1443.1 of this article, every cabana installed on or after July 31, 1976, or every accessory building or structure or building component installed on or after June 10, 1979, shall have the capacity to resist the applicable minimum snow load of the region in which it is installed or as is provided by this section. Note: An accessory structure located beneath another accessory structure (e.g., a porch which is located beneath an awning) is excluded from the snow load requirements of this section when the overlying accessory structure meets the requirements of this section.

<b>TABLE 1433-1</b>					
<b>General Roof Live Load Requirements for Accessory Buildings or Structures and Building Components</b>					
Region I		Region II		Region III	
Elevation	Roof Live Load	Elevation	Roof Live Load	Elevation	Roof Live Load
All Elevations	20 psf	0-3000 ft.	20 psf	0-2000 ft.	20 psf
		3001-3500 ft.	30 psf	2001-3000 ft.	30 psf
		3501-4000 ft.	60 psf	3001-4000 ft.	60 psf

Table 1433-1 shall apply except where either greater or lesser snow loads have been established through survey of the region, and approved by the department.

(1) Region I includes the following counties:

Alameda, Butte, Colusa, Contra Costa, Del Norte, Glenn, Humboldt, Imperial, Kings, Lake, Los Angeles, Marin, Mendocino, Merced, Monterey, Napa, Orange, Sacramento, San Benito, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Ventura, Yolo.

(2) Region II includes the following counties:

Amador, Fresno, Inyo, Kern, Modoc, Riverside, San Bernardino, Siskiyou.

(3) Region III includes the following counties:

Alpine, Calaveras, El Dorado, Lassen, Madera, Mariposa, Mono, Nevada, Placer, Plumas, Shasta, Sierra, Tehama, Trinity, Tulare, Tuolumne, Yuba.

(b) Parks that have received approval for a snow roof load maintenance program prior to July 7, 2004, shall maintain the snow roof load maintenance program, as long as accessory buildings or structures, or building components in the park do not meet the minimum roof loads for the area. Accessory buildings or structures or building components installed after July 7, 2004, must have the capacity to resist the applicable minimum roof live loads of the region in which it is installed, as set forth in Table 1433-1.

(c) The park owner or operator shall be responsible for the continued management of an existing snow roof load maintenance program approved for the park.

(d) Roof live load requirements shall not apply to storage cabinets.

(e) Accessory buildings or structures or building components may be relocated from one park to another and reinstalled under permit within another park provided the requirements for roof live load in the new park are not greater than the requirements of the park in which the accessory building or structure or building component was previously installed.

NOTE: Authority cited: Sections 18300, and 18610, Health and Safety Code. Reference: Section 18552, Health and Safety Code.

**§ 1433.1. Accessory Building or Structure Roof Live Loads in Parks Located Above 4,000 feet in Elevation**

(a) Notwithstanding the provisions of Section 1433, if an accessory building or structure that is proposed to be installed within a mobilehome park located above 4,000 feet in elevation does not have the capacity to resist the minimum snow loads as established for residential buildings by local ordinance, the accessory building or structure may only be installed in a mobilehome park if all of the following conditions apply:

- (1) The park has and is operating a snow roof load maintenance program approved by the enforcement agency;
- (2) the accessory building or structure has the capacity to resist a roof live load of sixty (60) pounds per square foot (psf) or greater;
- (3) the installation complies with all other applicable requirements of this chapter;
- (4) the installation is approved by the enforcement agency; and
- (5) the enforcement agency's approval of the snow roof load maintenance program is shown on the mobilehome park's permit to operate.

Note: An accessory structure located beneath another accessory structure (e.g., a porch which is located beneath an awning) is excluded from the snow load requirements of this section when the overlying accessory structure meets the requirements of this section.

(b) The operator of a mobilehome park located above 4,000 feet in elevation may request and obtain approval from the enforcement agency for a snow roof load maintenance program. The request for an approval shall include, but not be limited to, the following information:

- (1) The type of maintenance to be used to control snow accumulation;
- (2) the capacity and capability of personnel and equipment proposed to satisfactorily perform the snow roof load maintenance program; and
- (3) an application for an amended permit to operate in accordance with section 1014 of this chapter.

NOTE: Authority cited: Sections 18300, and 18610, Health and Safety Code. Reference: Section 18552, Health and Safety Code.

#### **§ 1434. Calculations and Test Procedures.**

(a) The load bearing capacity of elements or assemblies shall be established by calculations in accordance with generally established principles of engineering design. However, when the composition or configuration of elements, assemblies or details of structural members are such that calculations of their safe load-carrying capacity and basic structural integrity cannot be accurately determined in accordance with generally established principles of engineering design, structural properties of such elements or assemblies may be established by the results of tests that are designed and certified by an architect or engineer, with the test results approved by the department.

(b) When any structural design or method of construction is substantiated by calculations and supporting data, the calculations and supporting data shall be approved by an architect or engineer and shall be submitted to the department.

(c) When the design of accessory structures is substantiated by calculations or tests, all structural plans shall be approved by the architect or engineer in charge of the total design.

(d) When any design or method of construction is substantiated by tests, all of these tests shall be performed by an approved testing agency acceptable to the department or shall be directed, witnessed, and evaluated by an independent architect or engineer. All test procedures and results shall be reviewed, evaluated, and signed by an architect or engineer. The approved testing agency, architect, or engineer shall submit the evaluation of test results, calculations, and recommendations, to the department. The department may require that a representative of the department witness the test.

NOTE: Authority cited: Section 18300, Health and Safety Code. Reference: Section 18552, Health and Safety Code.

#### **§ 1506. Ramps and Handrails.**

When a ramp and handrail are to be constructed in place of a stairway, the requirements for the design and construction of the ramp and handrail are contained in the California Residential Code, except as otherwise provided in this chapter.

NOTE: Authority cited: Section 18300, Health and Safety Code. Reference: Section 18552, Health and Safety Code.

**R311.7.7.1 Height.** Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

**Exceptions:**

1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.

**R311.7.7.2 Continuity.** Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inch (38 mm) between the wall and the handrails.

**Exceptions:**

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

**R311.7.7.3 Grip-size.** All required handrails shall be of one of the following types or provide equivalent graspability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1¼ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6¼ inches (160 mm) with a maximum cross section of dimension of 2¼ inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than 6¼ inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of ¾ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least ⅝ inch (8 mm) within ⅞ inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least ⅜ inch (10 mm) to a level that is not less than 1¾ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1¼ inches (32 mm) to a maximum of 2¾ inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

**R311.7.7.4 Exterior wood/plastic composite handrails.** Wood/plastic composite handrails shall comply with the provisions of Section R317.4.

**R311.7.8 Illumination.** All stairs shall be provided with illumination in accordance with Section R303.6.

**R311.7.9 Special stairways.** Spiral stairways and bulkhead enclosure stairways shall comply with all requirements of Section R311.7 except as specified below.

**R311.7.9.1 Spiral stairways.** Spiral stairways are permitted, provided the minimum clear width at and below the handrail shall be 26 inches (660 mm) with each tread having a 7½-inch (190 mm) minimum tread depth at 12 inches (914 mm) from the narrower edge. All treads shall be identical, and the rise shall be no more than 9½ inches (241 mm). A minimum headroom of 6 feet 6 inches (1982 mm) shall be provided.

**R311.7.9.2 Bulkhead enclosure stairways.** Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside *grade* level to the *basement* shall be exempt from the requirements of Sections R311.3 and R311.7 where the maximum height from the *basement* finished floor level to *grade* adjacent to the stairway does not exceed 8 feet (2438 mm) and the *grade* level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other *approved* means.

**R311.8 Ramps.**

**R311.8.1 Maximum slope.** Ramps shall have a maximum slope of 1 unit vertical in 12 units horizontal (8.3 percent slope).

**Exception:** Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 percent slope).

**R311.8.2 Landings required.** A minimum 3-foot-by-3-foot (914 mm by 914 mm) landing shall be provided:

1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.

**R311.8.3 Handrails required.** Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

**R311.8.3.1 Height.** Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

**R311.8.3.2 Grip size.** Handrails on ramps shall comply with Section R311.7.7.3.

**R311.8.3.3 Continuity.** Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1½ inches (38 mm) between the wall and the handrails.

## SECTION R312 GUARDS

**R312.1 Where required.** *Guards* shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

**R312.2 Height.** Required *guards* at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 42 inches (1067 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

### Exceptions:

1. *Guards* on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the *guard* also serves as a handrail on the open sides of stairs, the top of the *guard* shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

**R312.3 Opening limitations.** Required *guards* shall not have openings from the walking surface to the required *guard* height which allow passage of a sphere 4 inches (102 mm) in diameter.

### Exceptions:

1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a *guard*, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. *Guards* on the open sides of stairs shall not have openings which allow passage of a sphere  $4\frac{3}{8}$  inches (111 mm) in diameter.

**R312.4 Exterior woodplastic composite guards.** Woodplastic composite *guards* shall comply with the provisions of Section R317.4.

## SECTION R313 AUTOMATIC FIRE SPRINKLER SYSTEMS

**R313.1 Townhouse automatic fire sprinkler systems.** An automatic residential fire sprinkler system shall be installed in *townhouses*.

**Exception:** An automatic residential fire sprinkler system shall not be required when *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.

**R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for *townhouses* shall be designed and installed in accordance with Section R313.3 or NFPA 13D.

**R313.2 One- and two-family dwellings automatic fire systems.** An automatic residential fire sprinkler system shall be installed in one- and two- family *dwellings*.

**Exception:** An automatic residential fire sprinkler system shall not be required for *additions* or *alterations* to existing buildings that are not already provided with an automatic residential sprinkler system.

**R313.2.1 Design and installation.** Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section R313.3 or NFPA 13D.

### R313.3 Dwelling unit fire sprinkler systems.

**R313.3.1 General.** Where installed, residential fire sprinkler systems, or portions thereof, shall be in accordance with NFPA 13D or Section R313.3, which shall be considered equivalent to NFPA 13D. Section R313.3 shall apply to stand-alone and multipurpose wet-pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall supply domestic water to both fire sprinklers and plumbing fixtures. A stand-alone sprinkler system shall be separate and independent from the water distribution system. A backflow flow preventer shall not be required to separate a stand-alone sprinkler system from the water distribution system.

**R313.3.1.1 Required sprinkler locations.** Sprinklers shall be installed to protect all areas of a *dwelling unit*.

### Exceptions:

1. Attics, crawl spaces and normally unoccupied concealed spaces that do not contain fuel-fired appliances do not require sprinklers. In *attics*, crawl spaces and normally unoccupied concealed spaces that contain fuel-fired equipment, a sprinkler shall be installed above the equipment; however, sprinklers shall not be required in the remainder of the space.
2. Clothes closets, linen closets and pantries not exceeding 24 square feet (2.2 m<sup>2</sup>) in area, with the smallest dimension not greater than 3 feet (915 mm) and having wall and ceiling surfaces of gypsum board.
3. Bathrooms not more than 55 square feet (5.1 m<sup>2</sup>) in area.
4. *Detached* garages; carports with no habitable space above; open attached porches; unheated entry areas, such as mud rooms, that are adjacent to an exterior door; and similar areas.

**R313.3.2 Sprinklers.** Sprinklers shall be new listed residential sprinklers and shall be installed in accordance with the sprinkler manufacturer's installation instructions.

**R313.3.2.1 Temperature rating and separation from heat sources.** Except as provided for in Section R313.3.2.2, sprinklers shall have a temperature rating of not less than 135°F (57°C) and not more than 170°F (77°C). Sprinklers shall be separated from heat sources

### SECTION R327.9 DECKING

**R327.9.1 General.** The walking surface material of decks, porches, balconies and stairs shall comply with the requirements of this section.

**R327.9.2 Where required.** The walking surface material of decks, porches, balconies and stairs shall comply with the requirements of this section when any portion of such surface is within 10 feet (3048 mm) of the building.

**R327.9.3 Decking surfaces.** The walking surface material of decks, porches, balconies and stairs shall be constructed with one of the following materials:

1. Ignition-resistant material that complies with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5
2. Exterior fire retardant treated wood
3. Noncombustible material
4. Any material that complies with the performance requirements of SFM Standard 12-7A-4A when attached exterior wall covering is also either noncombustible or ignition-resistant material

**Exception:** Wall material may be of any material that otherwise complies with this chapter when the decking surface material complies with the performance requirements ASTM E 84 with a Class B flame spread rating.

### SECTION R327.10 ACCESSORY STRUCTURES

**R327.10.1 General.** Accessory and miscellaneous structures, other than buildings covered by Section R327.1.3, which pose a significant exterior exposure hazard to applicable buildings during wildfires shall be constructed to conform to the ignition resistance requirements of this section.

**R327.10.2 Applicability.** The provisions of this section shall apply to trellises, arbors, patio covers, carports, gazebos and similar structures of an accessory or miscellaneous character.

**Exceptions:**

1. Decks shall comply with the requirements of Section R327.9.
2. Awnings and canopies shall comply with the requirements of Section 3105 of the California Building Code.

**R327.10.3 Where required.** Accessory structures shall comply with the requirements of this section.

**R327.10.3.1** Attached accessory structures shall comply with the requirements of this section.

**R327.10.3.2** When required by the enforcing agency, detached accessory structures within 50 feet of an applicable building shall comply with the requirements of this section.

**R327.10.4 Requirements.** When required by the enforcing agency accessory structures shall be constructed of noncombustible or ignition-resistant materials.

### SECTION R328 ELECTRIC VEHICLE

**R328.1 Electric vehicle.** An automotive-type vehicle for highway use, such as passenger automobiles, buses, trucks, vans and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array or other source of electric current. For the purpose of this chapter, electric motorcycles and similar type vehicles and off-road self-propelled electric vehicles such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.

**R328.2 Charging.** In any building or interior area used for charging electric vehicles, electrical equipment shall be installed in accordance with the California Electrical Code.

**R328.3 Ventilation.** Mechanical exhaust ventilation, when required by the California Electrical Code shall be provided at a rate as required by Article 625 or as required by Section 1203 of the California Building Code whichever is greater. The ventilation system shall include both the supply and exhaust equipment and shall be permanently installed and located to intake supply air from the outdoors, and vent the exhaust directly to the outdoors without conducting the exhaust air through other spaces within the building.

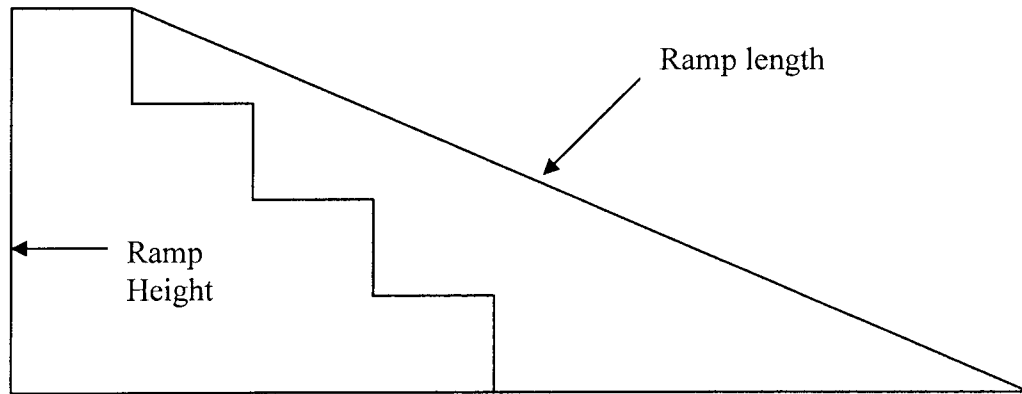
**Exception:** Positive pressure ventilation systems shall only be allowed in buildings or areas that have been designed and approved for that application.

**R328.4 Electrical interface.** The electrical supply circuit to electrically powered mechanical ventilation equipment shall be interlocked with the recharging equipment used to supply the vehicle(s) being charged, and shall remain energized during the entire charging cycle. Electric vehicle recharging equipment shall be marked or labeled in accordance with the California Electrical Code.

**Exceptions:**

1. Exhaust ventilation shall not be required in areas with an approved engineered ventilation system, which maintains a hydrogen gas concentration at less than 25 percent of the lower flammability limit.
2. Mechanical exhaust ventilation for hydrogen shall not be required where the charging equipment utilized is installed and listed for indoor charging of electric vehicles without ventilation.

## Ramp Length vs. Rise Height



Maximum vertical rise for each section is 30"

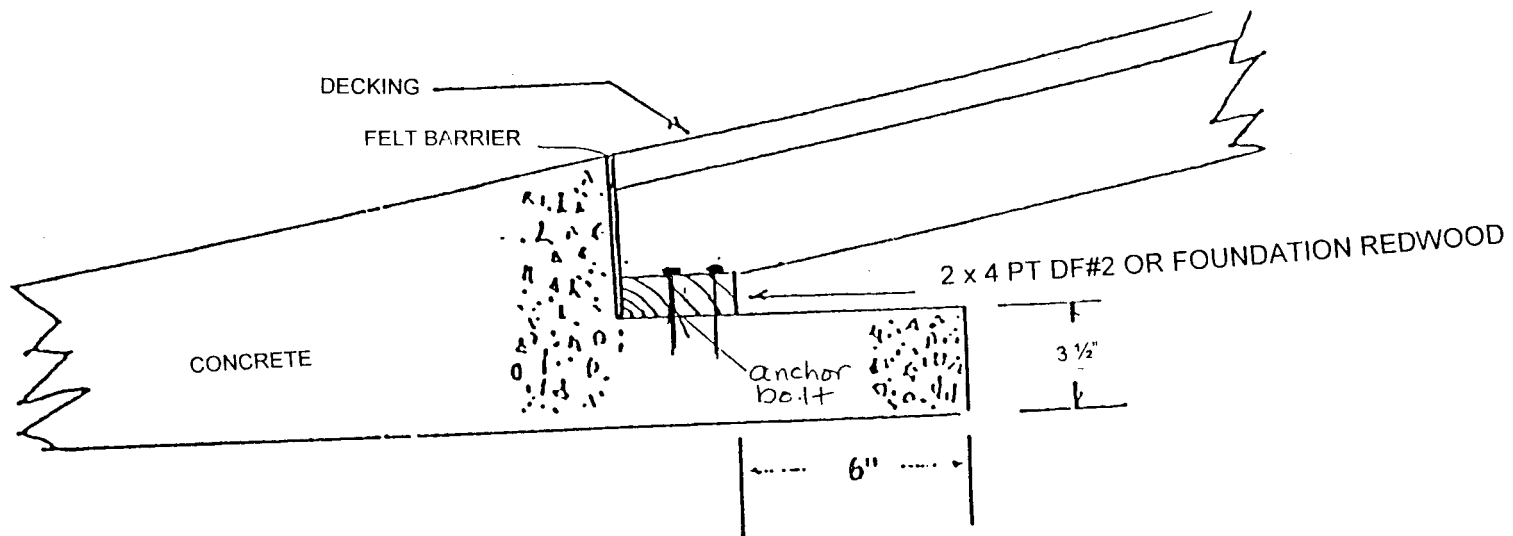
Height of Ramp (feet)	Minimum Length of Ramp at 1:12 (feet)	Minimum Length of Ramp at 1:8 (feet)
.5	6	4
1	12	8
1.5	18	12
2	24	16
2.5	30	20

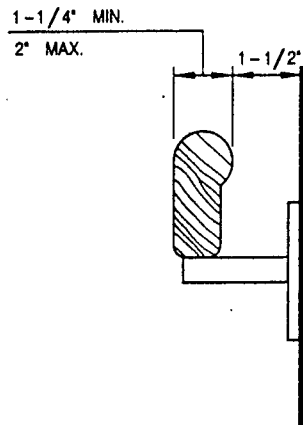
**1:12 SLOPE (8 percent slope)**

Slope required for commercial and public access ramps.

**1:8 SLOPE (12.5 percent slope)**

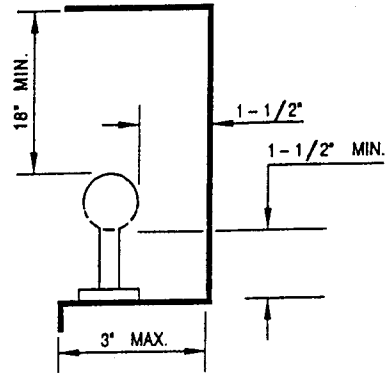
Allowed for pedestrian ramps; residential only.



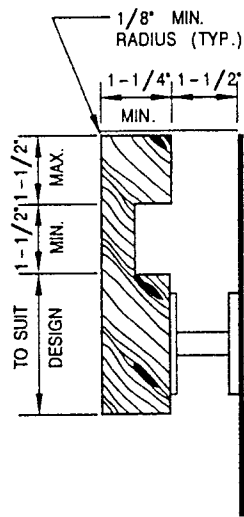


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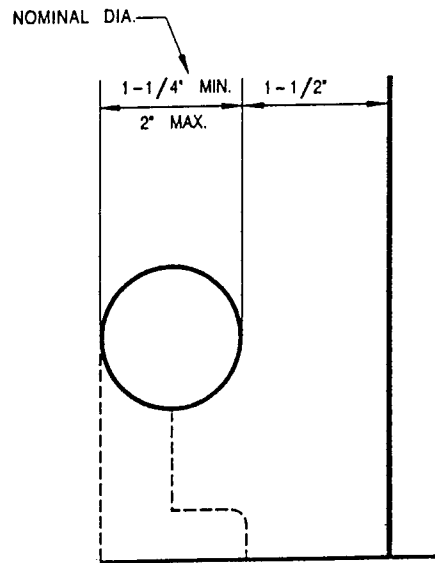
18\"/>



(b)



(c)



(d)

THESE DIAGRAMS ILLUSTRATE THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS AND ARE INTENDED ONLY AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION.

**DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT  
FREESTANDING AWNING, CARPORT, DECK, RAMADA OR  
ENCLOSURE PLANS INSTALLED ON A MOBILEHOME LOT  
(HCD PLANS ONLY)**



**THIS FEE SCHEDULE BECOMES EFFECTIVE FEBRUARY 1, 2009**

<b>SQ. FOOTAGE PER STRUCTURE</b>	<b>PERMIT FEE</b>	<b>VALUATION</b>	<b>TOTAL FEES</b>
0 - 54	196.00	45.00	196.00
55 - 82	196.00	54.00	196.00
82 - 108	196.00	63.00	196.00
109 - 135	196.00	72.00	196.00
136 - 162	196.00	81.00	196.00
163 - 190	196.00	90.00	196.00
191 - 217	196.00	99.00	196.00
218 - 244	196.00	108.00	196.00
245 - 271	196.00	117.00	196.00
272 - 298	196.00	126.00	196.00
299 - 325	196.00	135.00	196.00
326 - 352	196.00	144.00	196.00
353 - 379	196.00	153.00	196.00
380 - 406	196.00	162.00	196.00
407 - 433	196.00	171.00	196.00
434 - 460	196.00	180.00	196.00
461 - 488	196.00	189.00	196.00
489 - 515	196.00	198.00	198.00
516 - 542	196.00	207.00	207.00
543 - 569	196.00	216.00	216.00
570 - 596	196.00	225.00	225.00
597 - 623	196.00	234.00	234.00
624 - 651	196.00	243.00	243.00

**NOTES:**

**Any deviation from the HCD plans shall be subject to a minimum plan check fee of \$203.00 per hour.**

**Add \$7.00 to this fee schedule to alter the park lot electrical service for power to the enclosure. If the MH-Unit is to be altered to gain power, a separate permit (HCD 415) with a \$196.00 fee is required.**

(Evaluation fees are based on regulatory provisions identified in the California State Building Code)

Revised 1/09

**DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT  
FREESTANDING AWNING, CARPORT, DECK, RAMADA OR  
ENCLOSURE PLANS INSTALLED ON A MOBILEHOME LOT  
(NON HCD PLAN)**



**THIS FEE SCHEDULE BECOMES EFFECTIVE FEBRUARY 1, 2009**

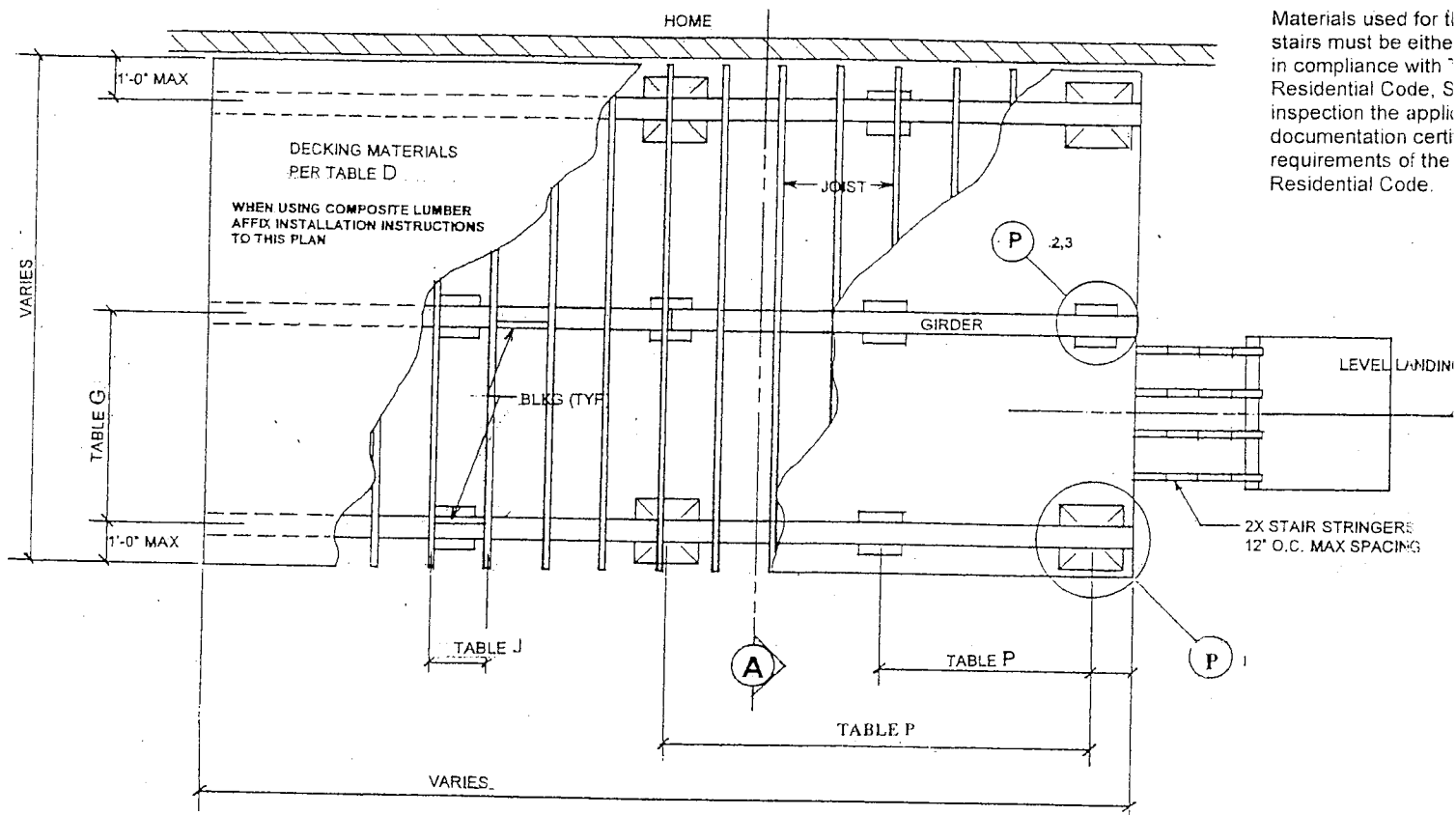
<b>SQ. FOOTAGE PER STRUCTURE</b>	<b>PERMIT FEE</b>	<b>VALUATION</b>	<b>PLAN CHECK</b>	<b>TOTAL FEES</b>
0 - 54	196.00	<del>45.00</del>	98.00	294.00
55 - 82	196.00	<del>54.00</del>	98.00	294.00
83 - 108	196.00	<del>63.00</del>	98.00	294.00
109 - 135	196.00	<del>72.00</del>	98.00	294.00
136 - 162	196.00	<del>81.00</del>	98.00	294.00
163 - 190	196.00	<del>90.00</del>	98.00	294.00
191 - 217	196.00	<del>99.00</del>	98.00	294.00
218 - 244	196.00	<del>108.00</del>	98.00	294.00
245 - 271	196.00	<del>117.00</del>	98.00	294.00
272 - 298	196.00	<del>126.00</del>	98.00	294.00
299 - 325	196.00	<del>135.00</del>	98.00	294.00
326 - 352	196.00	<del>144.00</del>	98.00	294.00
353 - 379	196.00	<del>153.00</del>	98.00	294.00
380 - 406	196.00	<del>162.00</del>	98.00	294.00
407 - 433	196.00	<del>171.00</del>	98.00	294.00
434 - 460	196.00	<del>180.00</del>	98.00	294.00
461 - 488	196.00	<del>189.00</del>	98.00	294.00
489 - 515	<del>196.00</del>	198.00	99.00	297.00
516 - 542	<del>196.00</del>	207.00	103.50	310.50
543 - 569	<del>196.00</del>	216.00	108.00	324.00
570 - 596	<del>196.00</del>	225.00	112.50	337.50
597 - 623	<del>196.00</del>	234.00	117.00	351.00
624 - 651	<del>196.00</del>	243.00	121.50	364.50

**NOTES:**

**Add \$7.00 to this fee schedule to alter the park lot electrical service for power to the enclosure. If the MH-Unit is to be altered to gain power, a separate permit (HCD 415) with a \$196.00 fee is required.**

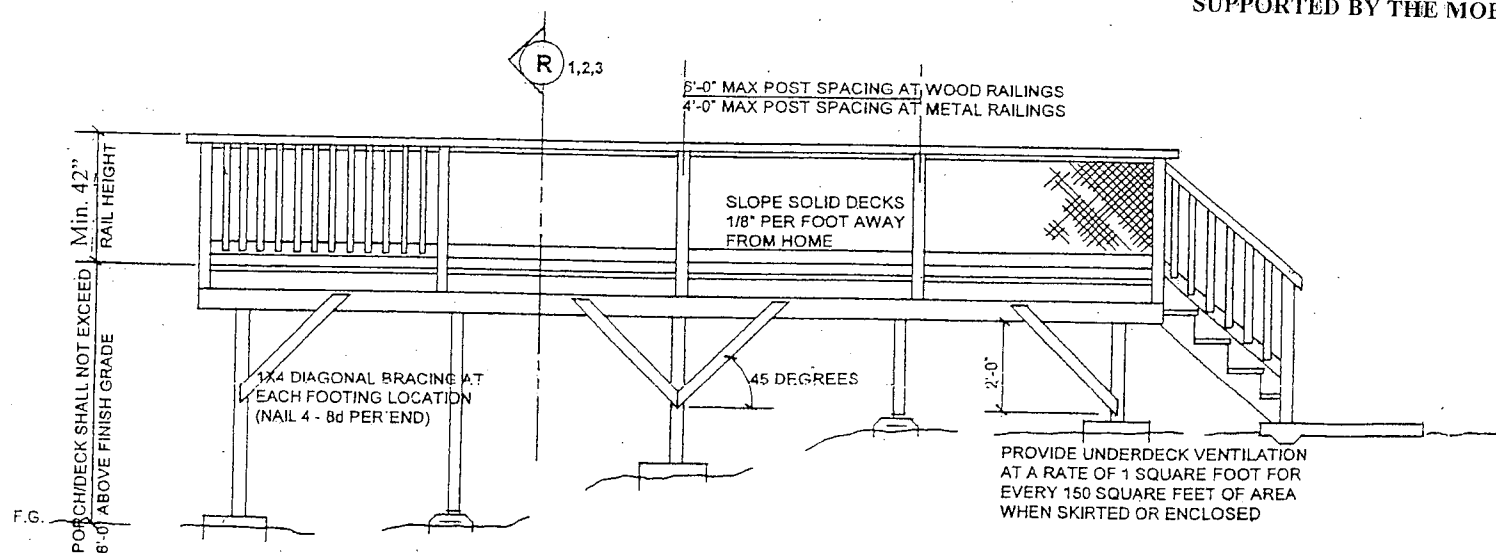
(Evaluation fees are based on regulatory provisions identified in the California State Building Code)  
Revised 1/09

Materials used for stairs must be either in compliance with the Residential Code, or inspection the applicable documentation certifying requirements of the Residential Code.



## PLAN

NOTE: PORCH/DECK SHALL BE SUPPORTED BY THE MOBILE HOME FOUNDATION.



## ELEVATION

TABLE D

DECKING		
MATERIAL	JOIST / GIRDER SPACING (max.)	COMMENTS
2X6 DOUGLAS-FIR	24" O.C.	NO. 2 OR BTR
2X6 CEDAR	24" O.C.	ALL CLEAR OR KNOTTY GRADES
2X6 REDWOOD	24" O.C.	HEART B GRADE OR BTR
COMPOSITE LUMBER (I.E. TREX)	2" - 20" O.C.	PER MFGR SPECS
HARDWOODS (I.E. IPE, MAHOGANY)	5/4" - 16" O.C.	PREDRILLING OF FASTENER HOLES REQ'D
PLYWOOD, EXTERIOR GRADE, EXP. GP. 1		SPAN RATING
1. 7/16" - 1/2"	16" O.C.	24/16
2. 19/32" - 5/8"	20" O.C.	40/20
3. 23/32" - 7/8"	24" O.C.	48/24
4. 7/8" - 1"	32" O.C.	54/32
5. 1" - 1-1/8"	48" O.C.	60/48

### D NOTES:

- REFER TO SPECIFIC MANUFACTURER SPECIFICATIONS FOR INSTALLATION OF COMPOSITE LUMBER DECKING MATERIALS. INCLUDE SPECS. WITH PLAN FOR PERMIT.
- PLYWOOD SHEETING SHALL BE TONGUE AND GROOVE OR ALL EDGES SHALL BE BLOCKED.
- ALLOWABLE SPANS BASED ON SHEETING BEING CONTINUOUS OVER TWO OR MORE SUPPORTS, WITH STRENGTH AXIS PERPENDICULAR TO JOIST OR GIRDER SUPPORTS, WITH FASTENERS AT EACH JOIST.
- DIMENSIONAL LUMBER DECKING SPANS BASED ON MATERIAL INSTALLATION PERPENDICULAR TO JOISTS. WHEN INSTALLING AT ANGLES, REDUCE 2" O.C. AT 60 DEGREES, 4" O.C. AT 45 DEGREES AND 1/2" SPECIFIED JOIST SPACING AT 30 DEGREES.
- WOOD SURFACES EXPOSED TO WEATHER SHALL BE PAINTED OR OTHERWISE PROTECTED FROM THE ELEMENTS IF NOT NATURALLY RESISTANT TO DECAY.
- USE CORROSION-RESISTANT FASTENERS (I.E. HOT-DIPPED GALV. ALUMINUM, OR STAINLESS STEEL); TWO PER BEARING POINT. SIZE FASTENER TO PENETRATE JOIST AT LEAST 1-1/2 INCHES (I.E. 16d NAILS OR #12 SCREWS).

Skirting shall be appropriate material per Title 24, Part 327.7. It shall be flame and ember resistant and must be installed in accordance with the code.

located in Fire Severity Zones

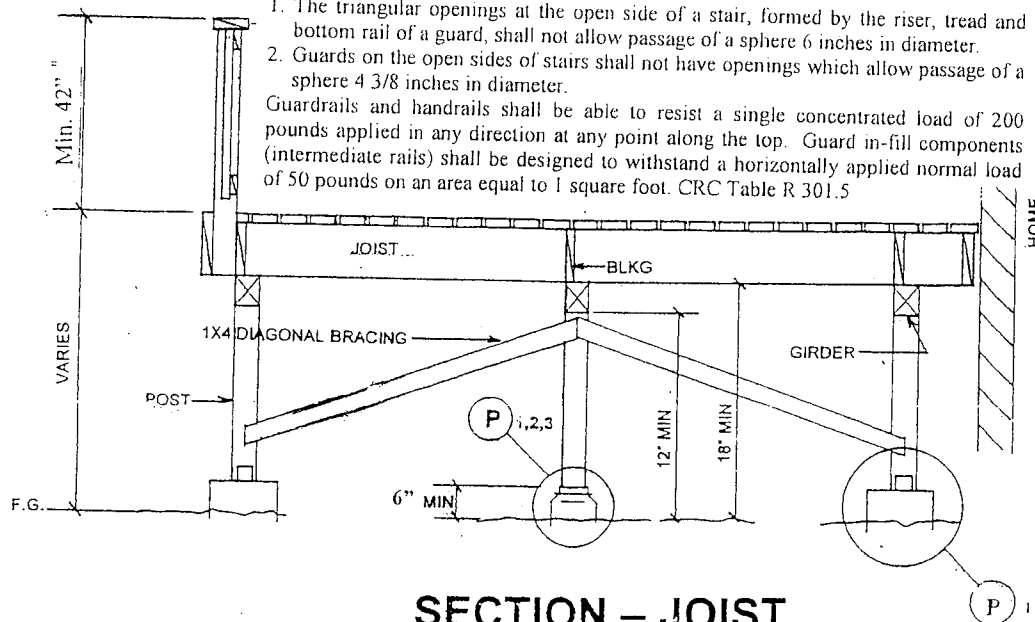
for the walking surface of decks and  
with Class A or B flame spread and be  
with Title 24, Part 2, California  
e, Section 327.9. At the time of  
applicant shall provide the supporting  
certifying the materials comply the  
the current edition of the California  
e.

Guards shall be located along open-sided walking surfaces, including stairs, ramps and  
landings, that are located more than 30 inches vertically to the floor or grade below  
any point within 36 inches horizontally to the edge of the open side. Required guards  
shall be not less than 42 inches high measured vertically above the adjacent walking  
surface, adjacent fixed seating or the line connecting the leading edges of the treads.  
Required guards shall not have openings from the walking surface to the required  
guard height which allow passage of a sphere 4 inches in diameter. 25 CCR 1502 &  
2502 and CRC. R 312.1, 312.2, 312.3.

Exceptions:

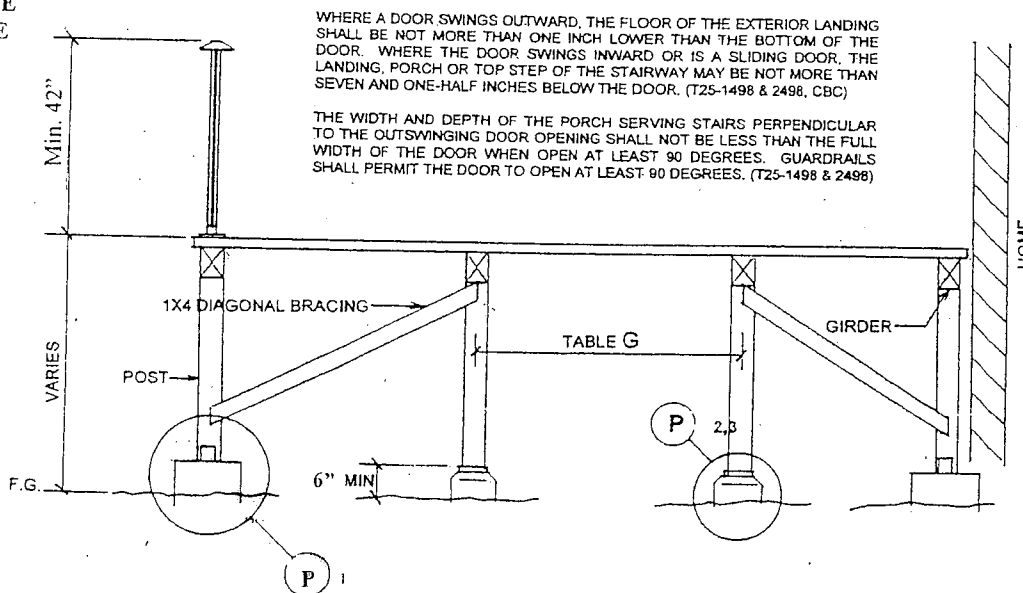
1. The triangular openings at the open side of a stair, formed by the riser, tread and  
bottom rail of a guard, shall not allow passage of a sphere 6 inches in diameter.
2. Guards on the open sides of stairs shall not have openings which allow passage of a  
sphere 4 3/8 inches in diameter.

Guardrails and handrails shall be able to resist a single concentrated load of 200  
pounds applied in any direction at any point along the top. Guard in-fill components  
(intermediate rails) shall be designed to withstand a horizontally applied normal load  
of 50 pounds on an area equal to 1 square foot. CRC Table R 301.5



## SECTION - JOIST

SHALL NOT BE  
MOBILE HOME



## SECTION - GIRDER

located in Fire Severity Zones

proved noncombustible or ignition-resistant  
Part 2, California Residential Code  
all provide protection from the intrusion  
in accordance with Standard SFM 12-7A-1  
ed at the time of final inspection.

### DESIGN ASSUMPTIONS

- Floor Load 40 psf dead, 20 psf live
- Wind 85 MPH
- Soil bearing 1,500 psf vertical
- Seismic D
- Codes 25 CCR Chapter 2 and 2.1 and  
Calif. Residential Code
- Hardware Simpson Strong-Tie or equal

REVISIONS	BY
4/15/08	AK
6/30/09	AK
03/11	AK

## PORCH / DECK PLAN - FREESTANDING

STATE OF CALIFORNIA  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
DIVISION OF CODES AND STANDARDS



Date	4/15/08
Scale	
Drawn	NOWMAN
Job	HCD C&S
Sheet	1
Of 2	Sheets

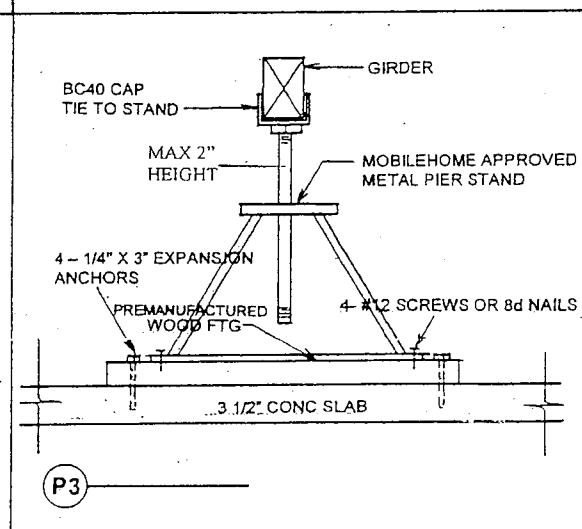
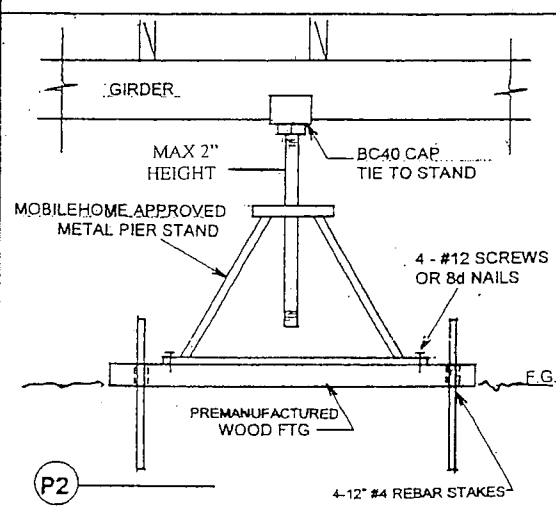
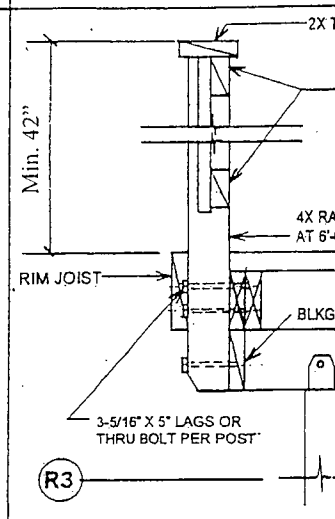
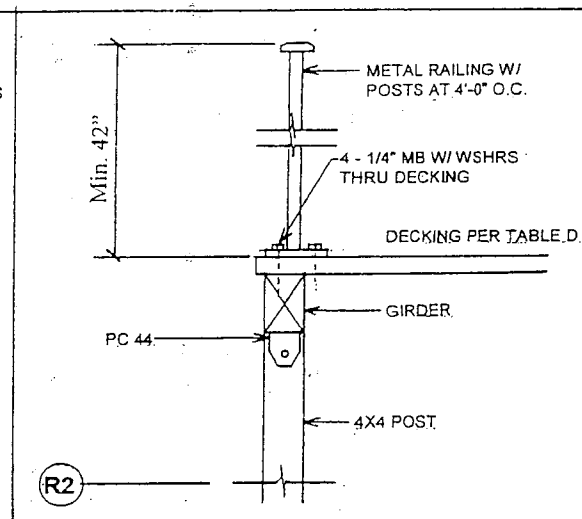
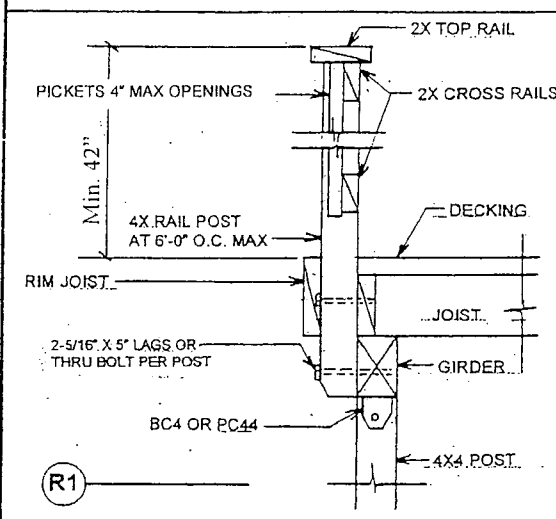
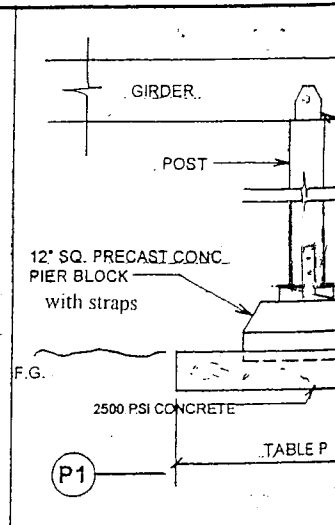
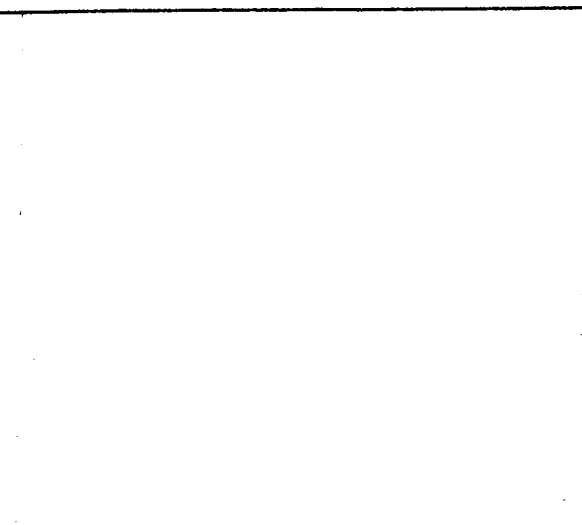
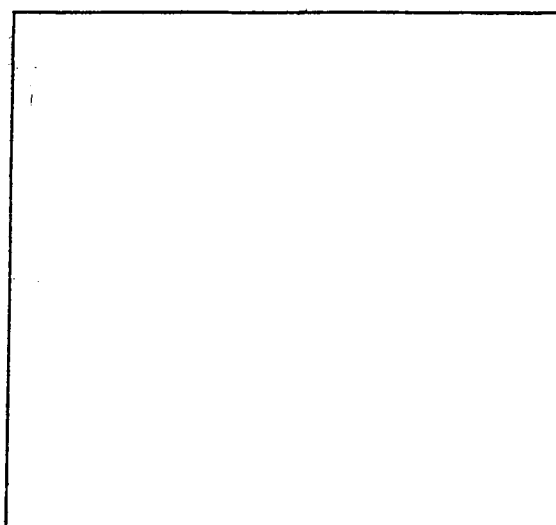


TABLE J

ALLOWABLES	
SIZE OF FLOOR JOIST	SPACING OF JOIST (INCHES)
2 X 6	12
	16
	24
2 X 8	12
	16
	24

TABLE G

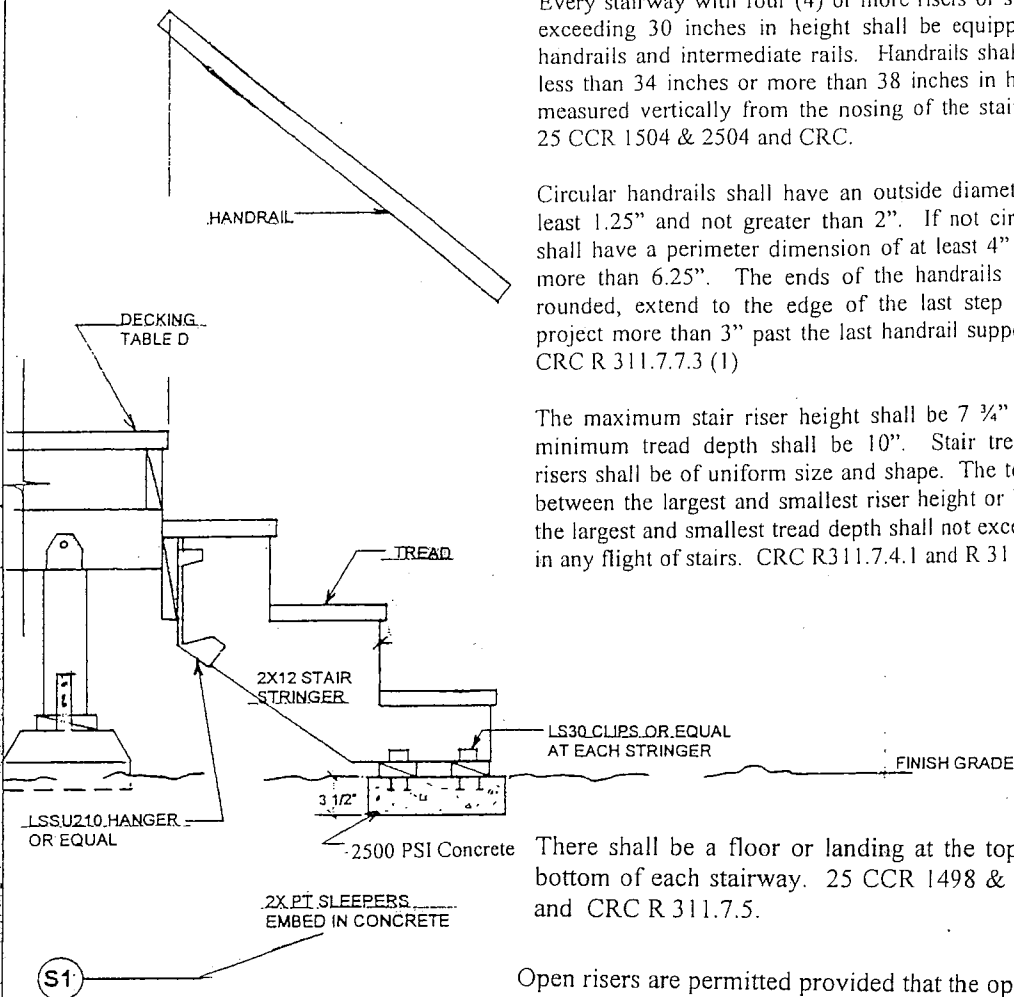
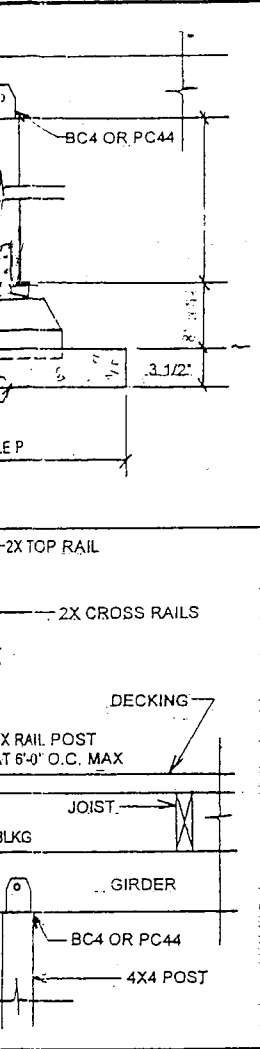
ALLOWABLE SPANS FOR GIRDERS		
GIRDER SIZE	4' O.C. SPACING	6' O.C. SPACING
4 X 6	5' 5"	5' 5"
4 X 8	6' 10"	6' 10"
4 X 10	8' 5"	8' 5"
4 X 12	9' 9"	9' 9"

G NOTES:

1. WHEN USING GIRDER ONLY DECK SYSTEM; GIRDER SPANS WILL BE LIMITED BY DECKING MATERIAL SPANS, REFER TO TABLE D.
2. WHERE A GIRDER IS SPLICED OVER A SUPPORT, AN ADEQUATE TIE SHALL BE PROVIDED.
3. POSITIVE POST-TO-BEAM CONNECTION IS REQUIRED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT.

J NOTES:

1. JOIST TO GIRDER NAIL BOX).
2. PROVIDE FULL DEPT GIRDER BEARING AT JOIST.
3. JOIST FRAMING FROM BE LAPPED AT LEAST APPROVED MANNER.
4. NOTCHES ON THE END OF FOURTH OF JOIST D NOT BE WITHIN 2 IN JOIST, AND THE DIA EXCEED ONE THIRD THE TOP OR BOTTOM ONE SIXTH THE DEP THIRD OF THE SPAN



Every stairway with four (4) or more risers or stairways exceeding 30 inches in height shall be equipped with handrails and intermediate rails. Handrails shall not be less than 34 inches or more than 38 inches in height as measured vertically from the nosing of the stair treads. 25 CCR 1504 & 2504 and CRC.

Circular handrails shall have an outside diameter of at least 1.25" and not greater than 2". If not circular, it shall have a perimeter dimension of at least 4" and not more than 6.25". The ends of the handrails shall be rounded, extend to the edge of the last step and not project more than 3" past the last handrail support post. CRC R 311.7.7.3 (1)

The maximum stair riser height shall be 7 3/4" and the minimum tread depth shall be 10". Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8" in any flight of stairs. CRC R311.7.4.1 and R 311.7.4.2

There shall be a floor or landing at the top and bottom of each stairway. 25 CCR 1498 & 2498 and CRC R 311.7.5.

Open risers are permitted provided that the opening between treads does not permit the passage of a 4" diameter sphere. CRC R 311.7.4.3.

MAXIMUM SPANS FOR JOISTS		
	DOUGLAS FIR LARCH NO. 2	DOUGLAS FIR LARCH NO. 1
10' 6"	10' 11"	
9' 1"	9' 8"	
7' 5"	7' 11"	
13' 3"	14' 2"	
11' 6"	12' 4"	
9' 5"	10' 0"	

TABLE P

GIRDER SPAN 4' PIER SPACING	PIER LOAD CAPACITY	REQ'D BEARING AREA	CONCRETE PADS 2 - 1/2" THICK	WOOD PADS 2" NOMINAL
3' 6" TO 5' 5"	1250 psi	180 sq. in.	13 X 13	12 X 16
5' 6" TO 6' 10"	1660	240	15 X 15	12 X 24

GIRDER SPAN 6' PIER SPACING	PIER LOAD CAPACITY	REQ'D BEARING AREA	CONCRETE PADS 2 - 1/2" THICK	WOOD PADS 2" NOMINAL
3' 6" TO 5' 5"	1870 psi	270 sq. in.	16 X 16	12 X 24
5' 6" TO 6' 10"	3120	450	21 X 21	2 - 12 X 20

P NOTES:

1. CONCRETE PIER BLOCK SHALL BE 12" SQUARE MINIMUM, PRE-MANUFACTURED UNITS WITH STRAPS.
2. METAL PIERS SHALL BE LISTED AND LABELED FOR MANUFACTURED HOUSING USE, WITH 12" MINIMUM BASE.
3. DOUBLE PIERS MAY NOT BE USED TO MEET MINIMUM LOAD CAPACITY.

REVISIONS	BY
3/11	AK

PORCH / DECK PLAN - FREESTANDING

STATE OF CALIFORNIA  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
DIVISION OF CODES AND STANDARDS



Date: 4/15/08
Scale:
Drawn: NOWMAN
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Sheet: 2
Of 2 Sheets